

RFID Tracking Wood Products

Challenge: Design a system to track wood products as they navigate the manufacturing process.

Solution: Zebra FX9600 RFID Reader, Zebra RFID antennas, Zebra hard RFID on-metal tags, and a custom fixture to mount the readers/antennas.

Story: A manufacturer of decorative wood products kept running into issues with missing product. When it is time to ship a complete product package to a customer, often, part numbers are missing and could not be located throughout the plant. Other times, the package ships to the customer, only to discover that the order is missing certain components. The manufacturer was tired of dealing with these issues and decided they needed a system to track their wood products as they travel the plant floor.



They decided to reach out to a long-time supplier of theirs, EMP Technical Group. EMP previously supplied them many pieces of hardware and custom software solutions, so they knew their capabilities.

EMP has extensive knowledge with RFID and knew this would be the best solution for tracking wood product throughout the customer's location. In order to track the product each item would need an RFID tag. A hard RFID on-metal tag is placed on the metal carts that the product resides on. The customer wanted to start by tracking every product as it exits the paint booth so the engineers at EMP designed a custom RFID portal with a Zebra FX reader and antennas.



The portal consists of a custom 80/20 Aluminum frame with wire mesh between the 80/20. The wire mesh is used to hold and funnel the RFID signal so that it remains strong. To minimize any accidental reads of nearby product, EMP also designed a guard with the integrated wire mesh. This guard shields the antennas from nearby RFID tags. The FX reader allows EMP to create a custom program that resides on the reader, eliminating the need for a separate logic controller. The entire system fits right into the current plant floor layout, and the customer is now tracking each product as it passes through each of their paint booths.

Are you tired of missing components on your plant floor? Contact EMP today to help track your product!